

*Descriptions of two larvæ and new genera and species of
CLAVICORN COLEOPTERA, and a synopsis of the genus HELOTA,
MacLeay; by ARTHUR SIDNEY OLLIFF.*

The species here described were, with one exception, received from Mr. Edward W. Janson, who, with great liberality, has permitted me to make what use of his collections I pleased, and thus, I am able to make known, among other novelties, more than one new species of the interesting genus *Helota*. The distribution of this genus seems, as far as our knowledge at present extends, to be rather wide; for, although none of the species extend beyond the limits of the Oriental region, if we include Japan, one of them, *H. guerini*, is found in such widely separated localities as Bombay, Travancore, Burmah and Java; whilst, on the other hand, some of the species appear to have a very limited range, either being confined to a group of islands, or, as in the case of *H. sinensis*, to the higher altitudes of the mainland. These insects are decidedly rare in collections, but this is doubtless due to the fact that they are difficult to find, and therefore, are not obtained by inexperienced collectors.

With regard to the named portion of the collection submitted to me by Mr. Janson, it may be advisable to mention that besides many rarities such as *Colastus fervidus*, Murray, from Villa Nova, and other species described from single examples, I found a perfect specimen of the curious, and I believe unique *Ctilodes bostrichoides*, Murray. This example was taken by Mr. Wallace at Gilolo, so this is an additional locality, as Murray's type was from the neighbouring small island of Morty. The specimen is only 8 mm. long, and differs from the type in having the pygidium rather more strongly punctured.

For the loan of the two larvæ, here described for the first time, I have to thank Mr. George Lewis. That of *Helota gemmata* is especially interesting, as it may throw some light on the affinities of the genus.

NITIDULIDÆ.

LIOSCHEMA.

Fairm. et Germ., Col. Chil. ii, p. 1 (1861).

Aparomia, Redtenbacher, Reise Novar., Coleopt. 35 (1867).

The pamphlet in which the two following species were characterised is so inaccessible that it may be useful to reproduce the original descriptions here.

Lioschema nigricolle.

Lioschema nigricolle, Fairm. et Germ., Col. Chil. ii, p. 1.

Nigrum, nitidum, subtiliter punctulatum, capite trifoveolato, prothorace antice valde angustato, lateribus arcuatis, marginatis, elytris postice parum angustatis, fulvo-castaneis, nigro-marginatis. Long. 8 mm.

Hab. Chili.

Lioschema rubrovarium, Pl. III, fig. 5.

Lioschema rubrovarium, Fairm. et Germ., Col. Chil. ii, p. 1.

Oblongum, postice leviter attenuatum, parum convexum, nitidum, nigrum, prothorace lateribus flavo anguste marginato, hoc margine canaliculato, elytris aut nigris rufo pictis, aut rufis lateribus nigro maculatis; capite tenuiter punctato, prothorace elytrisq. vix perspicue tenuiter punctulatis. Long. 9–10 mm.

Hab. Valdivia, Chili.

Lioschema germaini, n. sp., Pl. III, fig. 4.

Shining-black, moderately convex, slightly narrowed behind. Head longer than broad, extremely finely and rather closely punctured; with a longitudinal impression on each side before the eyes, and a transverse row of rather strong punctures near the base; this row of punctures extends nearly across the head, and is somewhat impressed in the centre. Prothorax transverse, considerably narrowed in front, extremely finely punctured; anterior margin slightly produced in the middle; margins flavous, rather broad and finely punctured. Scutellum triangular, extremely finely punctured. Elytra about twice as long as the prothorax, slightly narrowed posteriorly, yellowish red, with the suture dusky, extremely finely and closely punctured; humeral angles nearly right angles; sides with a slight

situation just behind the middle, then gradually rounded to the apex; inner apical angles rounded: each elytron with an elongate spot near the shoulder, a much larger spot considerably before the middle, a broad fascia behind the middle, and the apex black. Length 7-10 mm.

Valdivia, Chili (Germain).

Besides the great dissimilarity in the pattern and coloration of the elytra, this insect differs from *Lioschema rubrovarium* in having the metasternum rather more strongly punctured, and the prothorax rather more abruptly rounded at the sides. The males of *L. germaini* also appear to have the apex of the pygidium more sharply pointed than those of the other species.

Although judging from the words "elytris nigris rufo pictis" in the description of *L. rubrovarium*, MM. Fairmaire and Germain have considered this form as a variety, I cannot coincide in this view. M. Germain himself seems to have been undecided on this point, for I possess a specimen from his collection labelled in his own handwriting "*Lios. sp. nov. aut rubrovarium var.?*" I have examined a considerable number of specimens of these insects, and have come to the conclusion that they do not vary materially in colour or markings, and have, therefore, dedicated the form described above to M. Germain.

TROGOSITIDÆ.

HELOTA.

MacLeay, *Annulosa Javanica*, p. 42 (1825).

Reitter has (*Deutsche Ent. Zeitschr.* xx, p. 31), and I think with reason, placed this genus in a separate subfamily at the head of the *Trogositidæ*.

LIST OF SPECIES.

Helota vigorsi.

Helota vigorsi, MacLeay, *Ann. Jav.*, p. 43, pl. i, fig. 9.
India, Java, Malacca.

Helota servillei.

Helota servillei, Hope, *Col. Man.*, vol. iii, p. 187, pl. iii, fig. 4.
Bengal, Poonah, Travancore.

Helota gemmata.

Helota gemmata, Gorham, Trans. Ent. Soc. Lond. (1874), p. 448; Reitter, Deutsche Ent. Zeitschr. (1876) xx, pl. i, fig. 1; Waterhouse, Aid ii, pl. cxxxiii, fig. 2.

Japan.

Larva, Pl. III, fig. 8.

Elongate, much depressed, pitchy black, shining, slightly attenuated behind. Head transverse; sides rounded, very sparingly covered with fine bristly hairs; with a moderately strong semi-circular impression on the disc, the concave side of which is towards the base. Epistoma rather large, sides oblique, with two rather strong longitudinal impressions extending from the base to just behind the anterior margin. Antennæ four-jointed; the basal large and transverse, second slightly shorter and much smaller, third cylindrical as long as the first two together, with a very small sharply pointed spine near the outer angle at the apex, fourth much smaller and about half as long as the third. Ocelli six on each side of the head, in two transverse series, the first near the base of the antenna; however, only five are visible when the head is viewed laterally as in the plate (fig. 8 d). Labrum very short, rounded in front, anterior margin clothed with a few bristly hairs. Mandibles stout, strongly curved; each provided on the inner side with four small obtuse teeth, acutely bifid at the apex. Maxillæ rather large, obliquely truncate at the apex, which is covered with short and very strong bristle-like curved hairs; maxillary palpi four jointed, basal moderately large and transverse, second rather narrower, third decidedly longer and thickening towards the apex, fourth longer than the third, narrowed towards the extremity, and terminated by a small, compact, ovate club. Labium moderately large, rounded in front, deeply impressed on each side; labial palpi three jointed, basal nearly as broad as long, second rather narrower and longer, apical slightly narrowed towards the extremity. First thoracic segment much broader than long, slightly raised in front, then sloping downwards to the base, with a moderately long flexuous impression on each side of the disc, and a strongly marked medial line; anterior margin somewhat thickened, sides finely punctured and clothed with rather long bristle-like hairs. Abdominal and second and third thoracic segments very short, finely wrinkled transversely, delicately and sparingly punctured, covered, especially near the sides, with very small tubercles and bristly hairs; each segment with a strongly impressed central longitudinal line, and

a fulvous patch on each side near the margin; sides with rather long flesh-coloured protuberances, these protuberances are flat and rather broad at the base, at about half their length they are much narrowed and become nearly cylindrical: each of these cylindrical portions is furnished near the middle with a few moderately long bristly hairs, and at the apex with a much longer and stouter one. The last abdominal segment much narrower and shorter than the others, furnished with two long slightly elevated spine-like appendages, which are narrowed towards the apex: each of these appendages is slightly hooked at the tip and provided with small spiny excrescences, of these one near the base is decidedly the largest. Stigmata of the normal number and position. Legs rather short, unarmed; femora with a few hairs near the apex; claws simple. Length 12 mm.; greatest width 4 mm.; width of the head $2\frac{1}{3}$ mm.

This curious larva was obtained by Mr. George Lewis during his last visit to Japan. It was found in company with the perfect insect, feeding on sap exuding from the bores made by the larva of a species of *Cossus*, a situation, in which Mr. Lewis had often observed these insects.

Helota gorhami, n. sp.

Nearly allied to *H. gemmata*; usually somewhat larger and always more elongate, prothorax with the sides more strongly serrulate especially in the male; elytra with the punctures stronger and the interstices decidedly more raised: in the female the apex much more produced and abruptly acuminate. Beneath, the first two, and often the third to fifth abdominal segments are of a uniform dark pitchy-brown colour, occasionally the whole underside is dark pitchy without a trace of rufous, but although every intermediate occurs between these extremes, the two first segments are invariably dark. Length 16–19 mm.; width $5-6\frac{1}{2}$ mm.

Shantung, N. China.

I think this form is worthy of a name, for, although it is very closely allied to *H. gemmata*, it presents the apparently constant differences given in the above description. In fact, it may be considered a more vigorous form, as the characters in which it differs from that species seem to point to a higher state of development.

Helota sinensis, n. sp., Pl. III, fig. 3.

Oblong, brownish-bronze, with purple reflection, shining, rather strongly punctured. Head much longer than broad, considerably produced in front of the eyes; closely and rather strongly punctured, especially towards the sides; with two feebly raised longitudinal elevations on the disc, the space between the elevations narrow and less closely punctured. Antennæ pitchy, the club yellow, thickly covered with yellowish grey pubescence. Prothorax broader than long, very slightly narrowed and emarginate in front, strongly and irregularly punctured; with rather broad, almost impunctate raised patches on the disc; these patches are variable in form, but a large U-shaped elevation on the anterior half, and two or three much smaller ones near the base are very conspicuous. Scutellum small, transverse and rounded behind. Elytra considerably longer than the head and prothorax together, narrowed behind, rather strongly and irregularly punctured at the sides; with rows of elongate polished elevations on the disc: each elytron with two raised flavous spots on the disc, one considerably before the middle, and the other nearer the apex. Underside pitchy and shining; sterna strongly and not very closely punctured; abdominal segments extremely finely punctured. Legs pitchy; femora finely punctured and bronzy at the tips. Length $8\frac{1}{2}$ mm.; width 3 mm.

Shantung, N. China; found at considerable elevations only.

Allied to *Helota gemmata*, Gorham.

Helota thibetana.

Helota thibetana, Westw., Ann. Mag. Nat. Hist. viii, p. 123.

Helota melli, Westw., Cab. Orient. Ent., p. 86, pl. xli, fig. 8. Thibet, Simlah.

This is the only species of the genus of which I have not seen specimens. I have, however, found *H. servillei* under this name in several collections.

Helota guerini, Pl. III, fig. 1.

Helota guerini, Hope, Col. Man., vol. iii, p. 188.

Helota ocellata, Ritsema, Notes Leyd. Mus. iii, p. 79.

Bombay, Travancore, Burmah, Java.

Helota cereopunctata.

Helota cereopunctata, Lewis, Ent. Mo. Mag. xvii, p. 255; Waterhouse, Aid ii, pl. cxxxiii, fig. 1.

Chiuzenji, Ontake and Oyayama, Japan.

Helota culta, n. sp., Pl. III, fig. 2.

Elongate, slightly narrowed both in front and behind, shining brassy-green. Head slightly narrowed in front, nearly flat between the eyes, rather finely and very closely punctured at the apex, less closely punctured at the base. Epistoma as finely and more closely punctured than the head. Antennæ reddish testaceous. Prothorax a little longer than broad, narrowed in front, slightly constricted just behind the middle, moderately convex, strongly and sparingly punctured on the disc, rather more closely so at the sides; anterior angles rounded, posterior sharply pointed and acute. Scutellum small, transverse, rounded behind and impunctate. Elytra not quite twice the length of the head and prothorax together, as broad as the prothorax at the base, slightly narrowed posteriorly; humeral angles not very prominent; sides nearly parallel, rounded behind; apical sutural angles slightly rounded, without any tooth: each elytron with eight rows of rather finely punctured striae, and two rather large, very slightly raised oval spots on the disc, one just before the middle and the other near the apex. Underside fulvous; head and under-margins of the prothorax brassy, very strongly punctured; pro- and metasternum fulvous and impunctate; abdominal segments extremely finely punctured. Legs reddish-testaceous; knees, tips of the tarsi, and the claws green. Length 6 mm.

North India.

This very distinct and pretty species is the smallest of the genus. It is allied to *Helota guerini* and *H. cereopunctata*, but is easily distinguished from either by its proportionately longer and narrower prothorax, more parallel form, smaller size, and the different punctuation of the sterna and under-margins of the prothorax. The specimen described is a female and is, as far as I am aware, unique in Mr. Janson's collection.

Helota semifulva.

Helota semifulva, Ritsema Notes Leyd. Mus. iii, p. 80.

Java, India.

There is one specimen of this curious species in the National Collection, labelled "India."

SYNOPSIS OF SPECIES.

Elytra with four more or less raised spots.

- I. Head strongly produced in front of the eyes; prothorax rugose, with raised impunctate patches, sides serrulate.
- A. Elytra regularly punctured in rows; legs fulvous, with the knees black.
- a. The spots on the elytra very large and very slightly raised, not interrupting but only obscuring the striae - - - *vigorsi.*
- b. The spots on the elytra strongly raised, not very large, and completely hiding the striae - - - - - *serrillei.*
- B. Elytra punctured in rows near the suture, irregularly punctured at the sides; legs either black or pitchy-brown, with the knees darker.
- a. The sides of the prothorax finely serrulate; abdominal segments rufous - *gemmata.*
- b. The sides of prothorax moderately strongly serrulate; first two, and sometimes the third to fifth abdominal segments black - - - - - *gorhami.*
- C. Elytra irregularly punctured all over; prothorax with the impunctate patches very small; legs pitchy - - - - - *sinensis.*
- D. Elytra with "rows of elevated shining tubercles"; legs with the femora fulvous, the tips green; tibiae alternately fulvous and pitchy; tarsi pitchy - - - - - *thibetana.*
- II. Head only slightly produced in front of the eyes; prothorax without elevations, sides regularly rounded.
- A. Prothorax transverse, sides regularly rounded; under-margins of the prothorax and the prosternum rufous, regularly punctured; mesosternum only punctured at the sides.
- a. The spots on the elytra between the third and seventh striae - - - - - *guerini.*
- b. The anterior spots on the elytra between the fourth and sixth striae, the posterior between the third and sixth *cercopunctata.*
- B. Prothorax slightly longer than broad, sides

slightly constricted in the middle; under-
margins of prothorax brassy, very strongly
punctured; prosternum and metasternum
rufous and impunctate - - - - - *culta*.

Elytra without spots.

I. Fulvous, head and knees brassy, apical half of elytra
greenish-black - - - - - *semifulva*.

PARALINDRIA, n. gen.

Head large, transverse and nearly as broad as the prothorax. Eyes lateral, prominent, rather small and finely granulated. Antennæ moderately long, eleven-jointed; the basal article somewhat wedge-shaped and longer than the following ones, second to eighth very short, the club rather elongate and composed of three joints. Labrum rather large, very convex; anterior margin rounded and clothed with very fine bristly hairs. Mandibles large, prominent, slightly curved and simple. Maxillæ rather long; both lobes narrow, with the sides nearly parallel, and the anterior margin clothed with short hairs;* the outer lobe rounded in front, the inner oblique and armed at the internal angle with a small sharply pointed spine. Maxillary palpi four-jointed, the first very slightly longer than broad, second much longer, third about as long as the first, the terminal joint nearly as long as the second and third together and rounded at the extremity. Labium slightly emarginate in front, sides of the emargination oblique; with a feeble longitudinal ridge extending from the anterior margin to just before the base. Labial palpi slender and rather long, composed of three moderately long sub-equal joints, of which the apical is much broader at the apex than at the base. Prothorax transverse, rounded at the sides. Scutellum rounded posteriorly. Elytra with the sides parallel, rounded behind. Legs rather long; the femora comparatively short; tibiæ dilated towards the apex, and armed on their outer sides with prominent and acute spines; tarsi slender and moderately long, claws simple.

This genus is allied to *Alindria*, Erichs. In collections it should, I think, be placed between that genus and *Melambia*.

Paralindria partita, n. sp. Pl. III, fig. 6.

Elongate, sub-parallel, bright reddish castaneous, rather convex and shining. Head considerably broader than long, very

*These hairs have been omitted in the figure (6a) for the purpose of showing the outlines of the lobes more correctly.

convex, rather finely and moderately closely punctured, rounded in front, the sides nearly parallel behind the eyes. Clypeus rather more finely punctured than the head. Antennæ reddish testaceous. Eyes, labrum and tips of the mandibles blackish. Prothorax rather more finely and less closely punctured than the head; anterior and posterior margins nearly parallel, angles rounded, sides strongly arcuate. Scutellum shining and impunctate. Elytra considerably longer than the head and prothorax together, the basal portion bright reddish castaneous, the apical half black; finely striate punctate on the disc, irregularly and closely punctured at the sides, the interstices broad and impunctate; humeral angles rounded, very slightly produced; sides nearly parallel, rounded behind. Underside and legs rather paler in colour than the upper surface; tibiæ flattened, strongly dilated towards the apex; anterior tibiæ with four spines, two being placed near the apex and two about the middle; intermediate and posterior tibiæ with five or six rather sharper spines, placed in regular series. Length 9 mm.; width 3 mm.

Macas, Ecuador (Buckley).

This insect at first sight reminds one in its colouring of *Helota semifulva*, Rits.

LOPHOCATERES.

Olliff, Trans. Ent. Soc. Lond., 1883, p. 180.

Since writing the description of this genus I have received specimens of "*Ostoma*" *yvani*, Allib, a small *Peltid* allied to my *Lophocateres nanus*. Previously *yvani* was only known to me from descriptions, and, I had no idea from its association with the European *Ostoma grossum*, that it had any connection with the small parallel-sided Bornean species which I had named *L. nanus*. Thomson in his "Skandinavien Coleoptera" divided *Ostoma*, or as it is generally called, *Peltis*, into several genera. However, no genus appears to have been made for *yvani*, as it is not included in Thomson's admirable work, and therefore, as it is closely allied to *Lophocateres nanus*, I think that both these insects should be associated in the same genus, and placed very near *Grynocharis*, Th. (Skand. col. iv., p. 190), in which is included *oblenga*, Linn., and the American *quadrilineata*, Mels. I am at a loss to understand why Herr Reitter (Deutsche Ent. Zeitschr. xx., p. 89), if he knew the insect, has referred *yvani* to

the genus *Ostoma*. The form, structure of the maxillæ and legs, will easily separate *Lophocateres* from *Grynocharis*, *Gaurambe* and *Ostoma*, the genera to which it is most nearly allied.

Lophocateres pilosus, n. sp.

Elongate, slightly broader behind than in front, dark reddish brown, shining, clothed with long greyish-yellow pubescence which is especially noticeable at the sides. Head finely and indistinctly punctured, slightly pubescent. Prothorax transverse, a little narrowed in front, moderately strongly and rather sparingly punctured on the disc, less sparingly so near the sides, pubescence much more pronounced than that of the head. Scutellum as finely punctured as the head. Elytra a little broader behind than in front, rather finely punctate-striate, the interstices rather broad and without punctures, although when viewed from the side, they present slight irregularities; anterior angles rounded; sides very slightly diverging for two-thirds of their length, then arcuately rounded to the apex. Underside, legs, and antennæ reddish testaceous, the club of the latter covered with yellowish-grey pubescence. Length 3 mm.; greatest width $1\frac{1}{2}$ mm.

Penang.

The three species of the genus *Lophocateres* may be distinguished thus:—

- A. Each elytron with six raised costæ.
 - a. Prothorax finely punctured; metasternum impunctate and shining - - - - - *nanus*.
 - b. Prothorax much more strongly punctured; metasternum finely but distinctly punctured - - - - - *yrani*.
- B. Elytra without trace of costæ - - - - - *pilosus*.

CUCUJIDÆ.

cucujus, Fabr.

Cucujus coccinatus, Lewis.

Larva. Pl. III, fig. 7.

Elongate, rather narrow, strongly depressed, reddish-testaceous and shining; thoracic and abdominal segments, except the anal, with a clearly defined medial line. Head large, about twice as broad as long, very slightly narrowed in front, broadly

impressed in the centre; sides oblique; posterior angles rounded. Epistoma with a slight emargination in front, sides oblique. Antennæ four-jointed; the basal very short, second much longer, third as long as the first and second together, the apical much narrower and about as long as the second. Ocelli, five on each side; three placed in front, near the base of the antenna, and two a short distance behind. Labrum rounded in front, with a long bristly hair on each side, and a few smaller ones on the disc. Mandibles strongly curved, acutely bifid at the apex. Maxillæ narrow, curved, covered with fine hairs at the apex; maxillary palpi three-jointed, the basal transverse, second more than twice as long the first, the apical rather shorter and narrowed towards the extremity. Labium very small, rounded in front, clothed with a few fine hairs; labial palpi composed of three articles, the basal very short, the second rather longer, the terminal narrowed towards the apex. Thoracic segments decidedly narrower than the head, sides arcuate, anterior and posterior angles rounded. Abdominal segments of the normal number; the first rather shorter than those of the thorax, the second to sixth gradually increasing in length, the eighth longer and narrower, the last very short and provided at the apex with two rather long, elevated, incurved spines; each of these spines has, near the base, a much shorter spine, which is bifid at the extremity. Stigmata, nine in number, similar to those of the larva of *Cucujus hæmatodes*, Erichs.* Legs well developed, very sparingly covered with fine hairs; claws curved and simple. Length 17 mm.

Japan (Lewis).

PLATYCOTYLUS.

Olliff Trans. Ent. Soc. Lond., 1883, p. 182.

Platycotylus nigripes, n. sp.

Black, with a steel-blue tinge, somewhat shining, much depressed. Head finely and moderately closely punctured. Prothorax nearly twice as broad as long, rather convex, finely and closely punctured; anterior and posterior angles produced; sides rounded and very slightly constricted before the base; posterior margin with a slight central impression. Scutellum transverse, rounded behind, very finely and irregularly punctured. Elytra

* Described by Erichson (Naturg. Insect. Deutsch. iii, p. 310) and Chapuis and Candèze (Mem. Soc. Liège viii, p. 86, pl. ii, fig. 8).

about twice as long as the head and prothorax together, moderately strongly punctate-striate, the interstices scarcely raised, rather broad, and impunctate; each elytron with a rather large, oval, reddish spot, before the apex. Underside pitchy-black, finely and rather closely punctured. Length $3\frac{1}{2}$ mm.; greatest width, $1\frac{1}{4}$ mm.

Kaioa Islands (Wallace). B.M.

Allied to *Platycotylus inusitatus*, Olliff, (Trans. Ent. Soc. Lond., 1883, p. 183; Aid ii, pl. cxxxiv, fig. 8), but much smaller and flatter. It is easily recognised by the different colour of its elytra and legs, as well as by its more finely punctured prothorax.

EXPLANATION OF PLATE III.

- Fig. 1. *Helota guerini*, ♀; a, apex of elytra of ♂.
 Fig. 2. *Helota culta*.
 Fig. 3. *Helota sinensis*, ♀; a, apex of elytra of ♂.
 Fig. 4. *Aparomia germaini*.
 Fig. 5. *Aparomia rubrocarium*.
 Fig. 6. *Paralindaria partita*; a, maxilla and maxillary palpus; b, labium and labial palpi.
 Fig. 7. Larva of *Cucujus coccinatus*; a, maxilla and maxillary palpus; b, labium and labial palpi; c, anal appendage; d, ocelli viewed laterally.
 Fig. 8. Larva of *Helota gemmata*; a, maxilla and maxillary palpus; b, labium and labial palpi; c, anal appendage; d, ocelli viewed laterally.

